

CLAIM AMENDMENTS

1 1. (currently amended) A method for dimensioning a
2 network based on Code Division Multiple Access techniques or CDMA
3 for input parameters that are representative of coverage
4 requirements and/or capacity requirements and/or quality
5 requirements able to provide at least a value of maximum
6 sustainable load per cell $[(\eta_{MAX})]$ given a plurality of services
7 provided, the method comprising the steps of: $[-]$

8 determining for each cell a load factor per cell $[(\eta_{UL},$
9 $\eta_{DL})]$ on the basis of the input parameters; ~~characterized by the~~
10 ~~steps of:—~~

11 verifying whether the determined load factor $[(\eta_{UL}, \eta_{DL})]$
12 corresponds to the maximum load sustainable $[(\eta_{MAX})]$ by ~~a base~~
13 ~~terminal station or BTS~~ the cell; and,

14 if the determined load factor $[(\eta_{UL}, \eta_{DL})]$ exceeds the
15 maximum sustainable load, dynamically ~~(η_{MAX})~~ ~~—~~ negotiating at the
16 Radio Resource Management $[(RRM)]$ level radio resources to be
17 allocated to at least one of the services provided ~~in said by the~~
18 network into the cell in such a way that the determined load factor
19 $[(\eta_{UL}, \eta_{DL})]$ per cell becomes smaller than or equal to the maximum
20 sustainable load $[(\eta_{MAX})]$ or is optimized by taking into account
21 the characteristics of the network.

1 2. (currently amended) The method as claimed in claim
2 ~~1, characterized in that wherein~~ the load factor per cell is
3 determined by taking into account real "power control" procedures,
4 by attributing to the ratio between useful signal power and total
5 interference density of the [[BTS]] cell a normal or Gaussian
6 distribution in decibels.

1 3. (currently amended) The method as claimed in claim
2 [[1 or]] 2 ~~, characterized in that wherein~~ the step of determining
3 the load factor per cell is carried out for the uplink radio path.

1 4. (currently amended) The method as claimed in claim
2 ~~3, characterized in that wherein~~ the step of dynamically
3 negotiating the radio resources to be allocated to at least one of
4 the services provided by the network in the cell comprises the step
5 of dynamically negotiating one among the functionalities of [[-]]
6 packet scheduling; [[-]]
7 congestion control; and [[-]]
8 admission control.

1 5. (currently amended) The method as claimed in claim ~~s~~
2 ~~1 or 2 , characterized in that wherein~~ the step determining the
3 load factor per cell is carried out for the downlink radio path.

1 6. (currently amended) The method as claimed in claim
2 ~~5, characterized in that wherein~~ the step of dynamically
3 negotiating the radio resources to be allocated to at least one of
4 the services provided by the network in the cell comprises the step
5 of dynamically negotiating one among the functionalities of [[-]]
6 code management; [[-]]
7 power management; [[-]]
8 packet scheduling; [[-]]
9 congestion control; and [[-]]
10 admission control.

1 7. (currently amended) A method for dimensioning a
2 network based on Code Division Multiple Access techniques or CDMA
3 for input parameters that are representative of coverage
4 requirements and/or capacity requirements and/or quality
5 requirements able to provide at least a value of maximum
6 sustainable load per cell $[(\eta_{MAX})]$ and a maximum number of radio
7 channels associated with corresponding codes provided for a
8 plurality of services provided, the method comprising the steps of:
9 $[-]$

10 determining for each cell by means of "link budget" a
11 load factor per cell for the uplink radio path $[(\eta_{UL})]$;
12 ~~and characterized by the steps of:—~~

13 verifying whether the determined load factor $[(\eta_{UL})]$
14 per cell corresponds to the maximum load sustainable $[(\eta_{MAX})]$ by a
15 ~~base terminal station or BTS~~ the cell, and if the outcome of the
16 verification is positive; $[-]$

17 determining by means of "pole capacity" the number of
18 radio channels and corresponding associated codes for the downlink
19 radio path; $[-]$

20 verifying whether the codes provides can be hosted in the
21 associated codes; and

22 if the number of associated codes exceeds the codes
23 provided for at least one service, dynamically $[[; -]]$ negotiating
24 at the Radio Resource Management $[(RRM)]$ level radio resources to
25 be allocated to at least one of the services provided ~~in the~~ by the

26 network into the cell so in such a way as to update the maximum
27 sustainable load $[(\eta_{MAX})]$.

1 8. (currently amended) The method as claimed in claim
2 7, ~~characterized by the further comprising the~~ steps of $[-]$
3 determining for each service a load factor per cell
4 $[(\eta_{UL})]$ and corresponding values of power per channel for the
5 downlink radio path; $[-]$
6 verifying whether the power per channel of at least one
7 service exceeds power limits prescribed for the service and, if the
8 power per channel of at least one service exceeds the prescribed
9 power limits; $[-]$
10 dynamically negotiating the radio resources to be
11 allocated to the $[\text{said}]$ service at the Radio Resource Management
12 $[(\text{RRM})]$ level ~~in such a way so~~ as to update the maximum
13 sustainable load $[(\eta_{MAX})]$.

9 -- 10. (canceled)